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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,308	11/20/2003	Christopher J. Cookson	3053-074	3088

22440 7590 11/27/2007

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EXAMINER	
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ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,308	COOKSON ET AL.	
	Examiner	Art Unit	
	Nathan Danielsen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8,10-13,15-25 and 31-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10-13,15-25 and 31-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3-8, 10-13, and 15-25, and 31-35 are pending. Claims 2, 9, and 14 have been canceled and claims 21-31 have been added in applicant's amendment filed 12 January 2007. Claims 26-30 have been canceled and claims 32-35 have been added in applicant's amendment filed 12 September 2007.

Claim Objections

2. The claims are objected to because of the following informalities:

a. In claim 1, "no data" should be changed to --no lead-in data--, as is similarly found in claim 17;

b. In claims 4 and 5, "said laser heads" should be changed to --said first and second laser heads--, as is recited in claim 3;

c. In claim 6, "said laser head" should be changed to --said first laser head--;

d. In claim 10, "each side respective carrying data layers" should be changed to --each side having at least one data layer-- and the period following "on its e sides" should be changed to a comma;

e. In claim 17, "the respective disc" should be changed to --each respective disc--;

f. In claim 32, "said locations" should be changed to --said two locations--;

g. In claim 33, "disc has hub" should be changed to --disc has a hub-- and "lead-in area disposed" should be changed to --lead-in area is disposed--; and

h. In claim 35, "wherein," should be changed to --wherein--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 24 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a. Regarding claim 24, the specification discloses where rotation specific data can be stored in either a BCA or a bar code, but is silent as to how the rotation specific data defines the BCA/bar coding or how BCA/bar coding formats can be used as rotation specific data. Additionally, applicant has not disclosed how a BCA or a barcode is the same as a lead-in area, as implied by the phrase "consisting of".

b. Regarding claim 31, the specification discloses where instructions are given to a user with the intent of allowing the user to operate a manual switch, where an error message can be given to the user, and where the rotational direction of the disc can be automatically reversed. However, the specification fails to disclose where instructions are given to the user *and* the rotational direction of the disc is automatically reversed.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4-6, 10-12, 19, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding claim 10, it is unclear exactly what is meant by the phrase "on its e sides". For purposes of examination, this phrase has been interpreted as not being part of the claim.

8. Claim 11 recites the limitation "either side of the disc", which lacks antecedent basis because claim 8 does not specify the number of data sides of the disc. Claim 12 recites the limitation "the other side", which lacks antecedent basis for the same reason as claim 11. Claims 8 and 24 recite the limitation "said rotation specific data" and claim 8 recites the limitation "the lead-in data" (each of which should be changed to --said machine readable rotation specific lead-in data--). Claim 21 recites the limitation "said manual selector". Claim 34 recites the limitations "said command" and "both locations". There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 8, 15-17, 19, 23, 25, 32, and 35 are rejected under 35 U.S.C. 103(a) as being obvious over Ishibashi et al (WO 01/18798 and US Patent 6,850,478; hereinafter Ishibashi), in view of Okabe et al (US Patent 6,018,506; hereinafter Okabe).

Regarding claim 1, Ishibashi discloses a player for reading data from an optical disc having data disposed along a spiral comprising:

a controller generating a first command to rotate the optical disc in a first direction when the disc is first inserted into the player (col. 7, lines 3-6 and figure 3);

a motor receiving said first command and rotating the disc in said first direction (figure 3); and

a first laser head positioned to read the data from the disc as the disc is rotated by the motor (figure 3);

wherein said controller is adapted to detect standard data in a predetermined area of the disc and if no data is detected, the controller generates a second command for reversing the rotation of said disc (col. 7, lines 3-65; where the "standard data" is the sync mark on a

reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks).

However, Ishibashi fails to disclose where the standard data is lead-in data reproduced from a lead-in area.

In the same field of endeavor, Okabe discloses where a lead-in area containing lead-in data comprising the sync marks of Ishibashi (figure 7 and col. 20, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Ishibashi with the features of Okabe, for the purpose of reproducing disc format data prior quickly and efficiently (col. 4, lines 56-67 and col. 20, lines 48-61).

Regarding claim 8, Ishibashi discloses a player reading data from disc having at least one of two configurations, in one configuration the disc having data arranged along a right handed spiral, in the second configuration the disc having data arranged along a left handed spiral, said disc further including machine-readable rotation specific data indicating the proper direction of rotation of the disc (figures 1 and 3), comprising:

a reader arranged and constructed to read said rotation specific data from the disc to determine the proper direction of rotation of the disc (col. 7, lines 3-65 and figure 3);

a controller coupled to said reader and generating a command in response (col. 7, lines 3-65 and figure 3);

a motor receiving said command and rotating said disc in a corresponding direction (col. 7, lines 3-65 and figure 3); and

a first laser head positioned to read the data from the disc as the disc is rotated by the motor (col. 7, lines 3-65 and figure 3).

However, Ishibashi fails to disclose where the rotation specific data is lead-in data reproduced from a lead-in area.

In the same field of endeavor, Okabe discloses where a lead-in area containing lead-in data indicating other characteristics and comprising the sync marks of Ishibashi (figure 7 and col. 20, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Ishibashi with the features of Okabe, for the purpose of reproducing disc format data prior quickly and efficiently (col. 4, lines 56-67 and col. 20, lines 48-61).

Regarding claim 15, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 8. Additionally, Ishibashi discloses where said reader reads reverse data from the disc (col. 7, lines 3-65).

Regarding claim 16, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 8. Additionally, Ishibashi discloses where said controller cooperates with said motor to rotate said disc in one of a first and second direction to determine the configuration of the disc (col. 7, lines 3-65).

Regarding claims 17 and 19, Ishibashi discloses a method of playing discs comprising:

inserting a disc in a player (inherent in optical disc players);

rotating the disc in a predetermined direction for either side of the disc (col. 7, lines 3-65);

attempting to read data from said disc as the disc is rotating in said predetermined direction (col. 7, lines 3-65); and

if no data can be read from the disc, then generating a command signal (col. 7, lines 3-65; where the "standard data" is the sync mark on a reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks).

However, Ishibashi fails to disclose where the data is lead-in data reproduced from a lead-in area.

In the same field of endeavor, Okabe discloses where a lead-in area containing lead-in data comprising the sync marks of Ishibashi (figure 7 and col. 20, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Ishibashi with the features of Okabe, for the purpose of reproducing disc format data prior quickly and efficiently (col. 4, lines 56-67 and col. 20, lines 48-61).

Regarding claim 23, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 1. Additionally, Ishibashi discloses where in response to said second command the motor reverses the direction of rotation of the disc (col. 7, lines 3-65).

Regarding claim 35, Ishibashi discloses a player for reading data from an optical disc having data disposed along a spiral, said disc including a main data area, said player comprising:

a controller generating a first command to rotate the optical disc in a first direction when the disc is first inserted into the player (col. 7, lines 3-6 and figure 3;

a motor receiving said first command and rotating the disc in said first direction (figure 3);

a first laser head positioned to read the data from the disc as the disc is rotated by the motor (figure 3);

wherein said controller is adapted to detect said special data and if no special data is detected, the controller generates a second command for reversing the rotation of said disc (col. 7, lines 3-65; where the "standard data" is the sync mark on a reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks).

However, Ishibashi fails to explicitly disclose an auxiliary data area used for special data including one of a lead-in data, BCA type coding data and a bar code formed of bars and spaces.

In the same field of endeavor, Okabe discloses where a lead-in area containing special data comprising the sync marks of Ishibashi (figure 7 and col. 20, lines 48-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Ishibashi with the features of Okabe, for the purpose of reproducing disc format data prior quickly and efficiently (col. 4, lines 56-67 and col. 20, lines 48-61).

Regarding claim 25, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 35. Additionally, Ishibashi discloses where said special data includes a signal having a predetermined signal with a predetermined shape and said controller checks said shape to determine the direcxtion of rotation for the disc (col. 7, lines 3-65 and figure 4; where the pattern of marks/spaces in the sync code have a predetermined shape).

11. Claims 3-5, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of Yamauchi (JP Patent Application Publication 11-007669).

Regarding claims 3-5, 10, and 11, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 1. However, Ishibashi, in view of Okabe, fails to disclose a second laser head, a second data side, and how data can be read from the disc.

In the same field of endeavor, Yamauchi discloses where the player further comprises a second laser head positioned adjacent to respective sides of the disc (figures 1 and 3), where said laser heads read data from said sides sequentially or simultaneously (suggested by the combination of ¶s 17, 26, and 35) while the disc rotates in the same direction (¶ 26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized two read heads, each facing one side of a disk and reading data either sequentially or simultaneously, as taught by Yamauchi, for the purpose of increasing the data transfer rate to and from the disc (¶ 26).

12. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of Iida et al (US Patent 5,702,792; hereinafter Iida).

Regarding claims 6 and 13, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claims 1 and 8, respectively. However, Ishibashi, in view of Okabe, fails to disclose a double-sided, multilayer disc.

In the same field of endeavor, Iida discloses where said disc has a data side with at least two data layers (figure 6), wherein said laser head is adapted to read data selectively from one or the other of said data layers (col. 7, line 60 through col. 8, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ishibashi to provide functionality for using the disc of Iida, for the purpose of increasing the storage capacity of the disc (col. 1, lines 46-50 and col. 2, lines 57-64).

13. Claims 7, 18, 21, 22, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of Gotoh et al (US Patent 5,694,387; hereinafter Gotoh).

Regarding claims 7, 18, 21, and 22, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 1 and 17. Additionally, Ishibashi discloses where the player further comprises a manual selector for the selection of the direction of said disc, said rotation detector being coupled to said manual selector (col. 11, lines 40-45). However, Ishibashi, in view of Okabe, fails to explicitly disclose a display providing instructions to a user and the action to be taken by the user.

In the same field of endeavor, Gotoh discloses a player comprising a display providing instructions to a user (col. 9, lines 60-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the functionality and components of Gotoh, for the purpose of informing the user that user intervention is required in order for the player to properly reproduce data from an optical disc (col. 9, lines 34-64).

Regarding claim 31, Ishibashi, in view of Okabe and Gotoh, discloses everything claimed, as applied to claim 18. Additionally, Ishibashi discloses where the rotation of the disc is automatically reversed in response to said control signal (col. 11, lines 40-45).

14. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of applicant's admitted prior art (hereinafter the AAPA).

Regarding claims 12 and 20, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claims 8 and 17. However, Ishibashi, in view of Okabe, fails to disclose reversing the direction of rotation based on the side of the disc to be reproduced.

In the same field of endeavor, the AAPA discloses where the method further comprises rotating the disc in a first direction for the first side of the disc and rotating the disc in an opposite direction for the second side of the disc (first full paragraph on page 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have reversed the direction of rotation of the optical disc based on which side was to be read, as taught by the AAPA, for the purpose of not having to flip the disc over to read the second side (paragraph starting on page 3 and ending on page 4).12.The player of claim 8 wherein said motor rotates

the disc in one direction when reading data from one side and the other direction when reading data from the other side.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of Tomita et al (US Patent Application Publication 2003/0202436; hereinafter Tomita).

Regarding claim 24, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 8. However, Ishibashi, in view of Okabe, fails to disclose where rotation specific data is stored in a BCA or bar code.

In the same field of endeavor, Tomita discloses storing data in a BCA, where this data indicates a specific operating condition of the apparatus intending to reproduce data from the disc (¶ 74).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the functionality of the apparatus of Tomita, for the purpose of providing data indicating a specific operating condition of an optical disc reproduction apparatus that is accessible in such a way as to quickly allow the reproduction of information (¶ 15).

16. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Okabe, and further in view of Kim (KR 10-0373536 and English translation US Patent 6,542,446).

Regarding claims 32-34, Ishibashi, in view of Okabe, discloses everything claimed, as applied to claim 1. Additionally, Okabe discloses where the disc has said lead-in area in one of two locations (element 201 in figure 17). However, Ishibashi and Okabe fail to disclose where said controller checks said locations for said lead-in data, where both locations are, and what happens after both areas are checked.

In the same field of endeavor, Kim discloses where said controller checks said locations for said lead-in data (col. 4, lines 35-57), where the disc has a hub and a periphery and said lead-in area disposed adjacent one of said hub and said periphery (figure 6), and where said controller generates said

command after checking both locations (the controller of Kim must inherently generate a command after to continue reproducing from the disc after reproducing data from either lead-in area).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus and disc of Ishibashi with those of Kim, for the purpose of enabling an apparatus to reproduce from or record on an optical disc having two distinct recording zones on a single side (col. 4, lines 35-57).

Response to Arguments

17. Applicant's arguments filed 12 January 2007 have been fully considered but are moot in view of the new ground(s) of rejection.

Closing Remarks/Comments

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen
11/21/2007

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